OIPE JC176
APR 15 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :

    Nicholas Sauriol et al.   :   Group Art Unit: 3621

Appln. No.: 09/749,408   :

                      :   Examiner: M. Huseman

Filed: December 28, 2000   :

For: Secure Database for   :
    E-Commerce   :

Assistant Commissioner
for Patents
Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

I, Nicholas Sauriol, hereby declare that I am a co-applicant in the above-identified patent application and that I am also a co-inventor of the invention that is described and claimed in the above-identified patent application. I also hereby declare that prior to December 15, 2000, my co-inventor and I completed, in the United States, the invention that is described and claimed in the above-identified patent application as evidenced by the following:

1.   Prior to December 15, 2000, my co-inventor and I conceived of the invention. At the time of the invention, I owed a duty of assignment of the invention to Nortel Networks Corporation (hereinafter "Nortel").

2. After my co-inventor and I conceived of the invention, and prior to December 15, 2000, my co-inventor and I submitted a description of the invention to the appropriate Nortel patent review committee for purposes of obtaining approval to file a patent application for the invention. A date redacted copy of the description of the invention (i.e., our invention disclosure) is attached hereto as Exhibit A.

3. To the best of my knowledge, the Nortel patent review committee followed its standard procedures in reviewing and subsequently approving of the filing of a patent application based upon our invention disclosure. A date redacted copy of an internal Nortel memo approving the filing of the patent application is attached hereto as Exhibit B.

4. On September 14, 2000, our invention disclosure (having been assigned Nortel Invention Docket No. 13307RO) was forwarded to one of Nortel's outside patent attorneys for preparation of a patent application. A copy of a transmittal letter authorizing preparation of a patent application is attached hereto as Exhibit C.

5. Between September 14, 2000, and December 20, 2000, my co-inventor and I had discussions regarding our invention disclosure with the outside patent attorneys, and provided additional supporting materials to the outside patent attorneys,

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all intended to assist the outside patent attorneys in preparing a patent application for the invention.

6. On December 20, 2000, I was forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit D.

7. On December 28, 2000, the above-identified patent application was filed. A copy of the filing receipt for the application is attached hereto as Exhibit E.

I further hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DECLARANT: _Nicholas Sauriol_

Date: _March 31, 2003_

EXHIBIT A

Invention Disclosure Submission Reply RECEIVED

Disc No:	13307RO	Received Date:	
Disclosure Title:	Secure Database for E-Commerce		

---=== Inventors ===---

Global Id	Name	Work Info	Home Info
0483086	HR Name: SAURIOL, NICHOLAS Known As: NICHOLAS	Location: 3500 CARLING AVENUE Dept: VV19 Phone: 3931978 Ext Phone: 6137631978 Fax: Ext Fax: MailStop: 04351C06 Citizenship: CANADA	Address: 223F CRAIG HENRY DR NEPEAN, ON CANADA K2G4B6 Phone: (613)5966736

---=== Attachments ===---

<End of Attachments>

Were there additional inventors involved:	no		Was there contractor involvement:	no
Name of Supervisor or Divisional Head:			Name of VP:	
RICK BARRE				
LOB:	SP&C		Business Unit:	Carrier Networks
Conception Date:				

Has this invention been discussed with others? If so, please complete:			
Inside Nortel - Whom?		Outside Nortel - Whom?	
Inside Nortel - When?		Outside Nortel - When?	
NDA?	yes		

Are you aware of any imminent future disclosures? Please provide dates and details:

Keywords for Searching:	Products that will use this invention:
	E-commerce solutions could implement or sell this idea

Does this invention arise from any arrangement involving an external organization?	no
Is this invention relevant to a Standards Activity?	Internal Funding Project #'s:
no	251-26513

Technical Information

Brief Description of the Invention:

The inventions consists of a database which maintains financial information (i.e. credit card information) about it's users. The information would be kept behind a network with a firewall and other security products. The network would be owned and run by a trusted internet security company, the 'host'. E-commerce companies would register with the 'host', and upon meeting certain requirements, would recieve software much like Nortels Internet Secure Access Client, providing a VPN to the 'host' network. Now when a user attempts to purchase a product from any vendor registered with the 'host' on-line, they would simply enter a userID and password, which could be changed at the users discretion. The only financial information would be transferred behind a secure firewall.

Problem Solved by the Invention:

When a 'customer' makes a purchase on-line today, most often it is over unsecure lines. A large number of potential customers are shyed away from the purchase due to this fact. A number of start-up companies also have trouble selling on-line due to the fact that a customer has no way of ensuring that the vendor is 'on the level'. When companies do provide secure access, the customers software is most often not upgraded (i.e. netscape requiring 128 bit encryption or a new certificate etc.), so the customer is again less likely to purchase the product/service.The following article from Wired Magazine talking about credit cards on the internet underlines the need for this invention:Credit Card Fraud Bedevils Web by Craig Bicknell 3:00 a.m. Apr. 2, 1999 PST When Bill McKiernan opened his online shop, Software.net, in 1994,buyers showed up in droves, paid with a credit card right on the spot,and downloaded their new software. McKiernan knew practically nothing about retailing, but suddenly hehad a thriving e-commerce company on his hands. There was just one problem: More than half of the orders on his sitewere made with stolen card numbers. Once the rightful cardholders noticed fraudulent charges,cancellations poured in from Software.net's credit card paymentprocessor. Not only was McKiernan out the cost of the stolen goods, hehad to pay a penalty for the bogus charges. "We were about to shut our doors because we were getting hit so hardwith fraud," says McKiernan. "We were losing money. We didn't knowwhat to do." That was in 1994. Software.net grew up into Net retail starBeyond.com. Sensing huge demand, McKiernan moved on and developed asoftware system for sniffing out fraudsters, launching a secondcompany, CyberSource, that helps merchants do the same. They're going to need the help. Lured by the success of Net superstars like Amazon.com, mom-and-popshops and real-world retailers are staking online claims that make theCalifornia gold rush look like an Easter egg hunt. Like McKiernan,many lack previous retail experience and don't know the risks of doingbusiness online. So the crooks are following right behind. "We have just a vast number of fraud orders coming into Yahoo Store,"says Paul Graham, the producer of Yahoo's online mall, Yahoo Store."The same thing that's a big advantage for Web sites -- theconvenience of finding what you want to buy and punching in a creditcard -- makes it much easier for fraudsters." Graham is quick to point out that Yahoo's stores aren't gettingrooked. Yahoo has built a software "radar" that picks up suspiciousbuying patterns. It has the advantage of being able to track a singleuser across 4,000 merchant sites on the Yahoo Store. "If someone's acrook, they don't just go to one site, they go on a shopping spree." Single merchants, though, can't see where else a surfer is shopping.And many don't take even the simplest precautions to protectthemselves. "It's a huge problem for the credit card industry," says NickFerrante, president of American Heritage Bankcard in Los Angeles. The Web didn't create credit card fraud. It's easy to filch a creditnumber from a dumpster, from a restaurant receipt, or over the phone.But the Web makes it even easier. According to Barry Bahrami, owner of e-commerce software vendorCommercial Illusions, stolen credit card numbers are routinely postedand swapped on Net bulletin boards and channels on Internet RelayChat, a real-time chat network. "With just a little bit of poking around, you'll find numbers therefor the taking, and a lot of times they even have the billingaddress," he said. Wired News logged onto an IRC channel that traffics credit cardnumbers and received two offers to trade within half an hour. The card numbers can come from traditional offline sources and frompoorly secured Web servers that store credit card information. There are also programs that generate valid credit card numbers out ofthin air. All valid card numbers end with a "check-sum" digit that'sgenerated from the credit card's other digits, by something called theMod-10 algorithm. The Mod-10 algorithm is widely known, and programs like CreditMasteruse it to gin up numbers that can fool a simple authorization check. Crooks can easily test thousands of numbers at online merchant sites. "They just punch in account number after account number after accountnumber until they get a hit," says Richard Gordon, president ofCreditcards.com, a company that helps online merchants set up creditcard accounts. When a merchant's issuing bank authorizes an online credit cardpurchase, it typically checks the number, expiration, and mailingaddress. Normally, that authorization check would catch asoftware-generated number. But for purchases of less than US$20, banks frequently run only aquick authorization, called a "stand-in," to make sure the number isvalid against the Mod-10 check sum. Some overseas banks, particularlyin Eastern Europe, run these simple authorizations for even biggerpurchases. That's a problem for Web merchants, because "so many of thetransactions are small dollar values," says Gordon. The first six numbers of any credit card are the BIN, for bankidentification number. It's easy enough to generate bogus numbers forbanks with lax stand-in thresholds. The Web also solves another problem for would-be criminals. Banks cancatch credit card crooks by tracing the shipping address for goodslike CDs or books. But there's no such protection for downloads ofsoftware, music, or subscriptions. Even authorizations that check addresses are no protection againstfraud originating overseas. "Out of the US, there's no help. There's no way to validate any pieceof the address," says Steven Klebe, VP of strategic alliances atCyberSource. That's a serious problem for a global e-commerce network.The fraudsters know it. Fraud is rampant in places like EasternEurope, where the technology infrastructure is fairly advanced, butthe laws governing electronic transactions are not. "Romania, in fact, is the center of Internet fraud," says Yahoo'sGraham. There have been months at the Yahoo Store, he says, when the number ofcredit card orders originating in Romania has topped that of bige-commerce countries like Germany and Japan, ranking third behind theUnited States and Canada. "I've looked at thousands of Internet charges from Romania, and onlytwo have been valid," Graham said. Sophisticated Web sites know how to flag and scrutinize transactionsoriginating outside the country, and some won't even accept foreigncards. "Most people are very reluctant to talk about fraud on the Net," saysOctavio Marenzi, research director at Meridien Research, aMassachusetts financial technology consulting firm. "Certainly, fraudrates are higher on the Internet, and probably much higher than peopleare willing to admit." With the exception of Visa, all the major credit companies declinedcomment. According to Visa, charges originating outside the United States areespecially problematic. Web transactions account for just 2 percent ofVisa's international business, yet those transactions account foralmost 50 percent of the total number of disputed charges and fraud. Visa would not release its fraud and dispute figure for chargesoriginating inside the US, but said it was much lower. It's important to note that fraud and disputed charges are separateproblems. Visa would not break out the numbers, but it said that therate of disputed charges was

Solutions that have been tried and why they didn't work:
The most common is secure software with encryption. This is widely used. The problem is, even though the info is encrypted, the customers financial information is still being sent over the web, which means that a hacker whom has discovered the decryption algorithm can easily intercept and steal this information. This method makes customers uneasy as they often do not trust the site from whom they are considering purchasing from. With the invention, all sites would have to prove their reliability, ensuring that the customer can feel safe with them, and at the same time, there is no financial info sent over the web as such, only an extranet, which is as secure as the network to which it is connected

Specific elements or steps that solved the problem and how they do it:
- The e-commerce site has a VPN (Virtual Private Network, or Extranet) with the 'host' network- Each e-commerce vendor is reviewed and approved before Extranet access in granted- Customers register their financial info once, not at every purchase with every vendor, after registration, solely a userID and password need be provided, which can be changed as often as the user desires.

Commercial value of the invention to Nortel and Nortel's major competitors:
If implemented, this service would allow for an enormous growth in the e-commerce industry, increasing sales drastically. I think this invention is very valuable to Nortel for this reason.

EXHIBIT B

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INTELLECTUAL PROPERTY LAW GROUP

John H. Vynalek
Senior Counsel, Intellectual Property
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Fax 919 997-6659 (ESN 357)
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& CONFIDENTIAL COMMUNICATION

To: Abdul Khawar Inventor's Vice President   Date: ████████
     Douglas Kerwin Inventor's Director
cc: Tom Gigliotti
     John Bourne

CARRIER SOLUTIONS INVENTION DISCLOSURE
REVIEW SUMMARY/DISPOSITION

Disclosure No.: 13307RO   Champion (Reviewer(s)): Eric Jensen
Title: Secure Database for E-Commerce
Review Date: ██████████
Inventor(s): Nicholas Sauriol
Department: W19   Critical Filing Date Deadline of _____ (if applicable)

☒ Nortel Inventors only   ☐ Nortel and Contractor Inventors

REVIEW SUMMARY

GIST OF THE INVENTION

Summarize within a few lines the major thrusts of the invention (*e.g.*, the invention differentiates voice versus data calls and routes each in the most efficient manner).

The invention is a database which maintains financial information about its users behind a network with a firewall and other security products.

VALUE FROM THE INVENTION

Summarize within a few lines the value of the invention to Nortel, Nortel's customers, or Nortel's competitors (*e.g.*, invention allows existing Nortel customers to make their existing networks Webtone-ready).

Would allow for an enormous growth in the e-commerce industry, thus increasing sales drastically.

    a. Technological Thrust: 2 (0-3)
    b. Inventive Value: 2 (0-3)
    c. Commercial Value: 3 (0-3)

OVERALL SCORE: 7
RECOMMENDATION: (check one)

☒ File Patent Application   ☐ Combine with/Include in Disclosure No. _____
☐ Closed without filing   ☐ Hold pending further review (see comments below)
☐ *Foreign Filing Potential* (list countries):_____

Comments: _____

Disposition: The review of this invention has generated the above recommendations. The Nortel IP Law Group will proceed with this recommendation 5 days from the date of this note unless we hear otherwise from you. Please take an opportunity to thank the inventor(s) and Champion for participating in this valuable process. If you have any questions or comments, please feel free to contact me at the number above.

(Revised ████████)

EXHIBIT C

NORTEL NETWORKS

4006 E. Highway 54
Network Center 2, MS D16/02/0E2
Durham, North Carolina 27713
Tel 919.997.3280
Fax 919.997.6659
vynalek@nortelnetworks.com

www.nortelnetworks.com

John H. Vynalek
Senior Counsel

September 14, 2000

VIA FEDERAL EXPRESS
792371558250

Mr. Scott Balderston
Hunton & Williams
1900 K Street, N.W.
Washington, DC 20006-1109

Re: **Invention Docket No.: 13307RO**
Title: Secure Database for E-Commerce
Required Filing Date: December 14, 2000

Dear Scott:

Nortel Networks would like to retain you to prepare and file in the United States Patent and Trademark Office (USPTO) a patent application directed to the invention disclosed in the enclosed invention disclosure by the above-referenced filing date. The application should be prepared according to Nortel Networks guidelines in accordance with the predetermined fee we have agreed with your firm. If you are unable to perform the requested work, please advise me immediately.

In addition to the invention disclosure, an invention disclosure Review Summary document is enclosed for your consideration. We request that you contact the primary inventor, Nicholas Sauriol, at (613) 763-1978 within two weeks of receiving this letter. Please ensure that the inventor(s) are advised of their responsibilities regarding their duty of candor to the USPTO, as well as any other relevant rules and/or laws including the best mode requirement.

Questions pertaining to substantive issues associated with the application should be addressed with me, while administrative issues associated with the application should be addressed with Rhonda Spivey at (919) 997-3824. Please be sure that all communications associated with the application, including billing statements and the application itself bear the above-referenced disclosure number.

Please send a substantially complete and final draft of the application to me along with a completed Nortel Networks Outsource's Patent Application Checklist at least 10 days prior to the above-referenced filing date to provide Nortel Networks' Intellectual Property Law Group sufficient opportunity to review the application prior to filing. You should seek to obtain the signatures on the formal papers from all inventors directly.
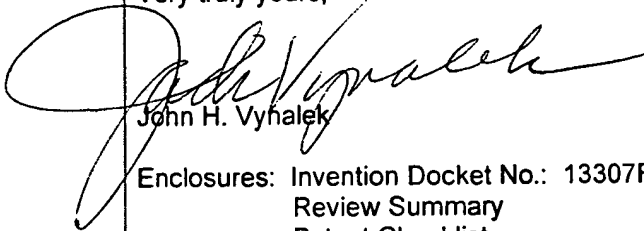
Please confirm receipt of this disclosure via facsimile to the above-identified number. Please include your assigned reference number.

Upon filing the application with the USPTO, immediately fax a copy of the application transmittal letter to me, so that we have a record that the application has been filed. Thereafter, please send me a hardcopy of the application as filed along with an electronic copy in Microsoft Word 6.0 readable format on a 3 ½" floppy disk.

Should you have any questions, please call me at (919) 997-3280.

Very truly yours,

John H. Vyhalek

Enclosures: Invention Docket No.: 13307RO
             Review Summary
             Patent Checklist

cc: Nicholas Sauriol

EXHIBIT D

Cuneo, Chris

From:	Balderston, Scott
Sent:	Wednesday, December 20, 2000 2:45 PM
To:	'Sauriol, Nicholas'
Cc:	'Vynalek, Jack'; Cuneo, Chris
Subject:	CONFIDENTIAL AND PRIVILEGED

Nic,

This email attaches a draft patent application on the Web transaction engine involving substitute credit card numbers. The draft was generated by Chris Cuneo of our office but his email server (suburban office) is down this afternoon, so he forwarded it to me to forward to you.

With a request Jack if you could possibly take a look to provide comments, this week before the holiday as well. With best holiday wishes to each of you, from all of us here in support of the company.

sdb

Secure Database for
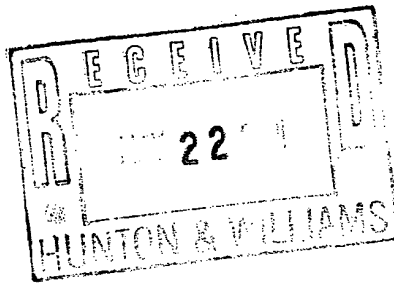E-Commerce...

EXHIBIT E

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/749,408	12/28/2000	2131	840	56130.000067	3	8	2

CONFIRMATION NO. 5257

RECEIVED 22 HUNTON & WILLIAMS

UPDATED FILING RECEIPT

OC000000006082397

James G. Gatto, Esq.
Hunton & Williams
Suite 1200
1900 K Street, N.W.
Washington, DC 20006

Date Mailed: 05/16/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)
Nicholas Sauriol, Nepean, CANADA;
Alex Sauriol, Kanata, CANADA;

DOCKETED

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted 02/06/2001

Projected Publication Date: 07/04/2002

Non-Publication Request: No

Early Publication Request: No

Title
Secure database for E-commerce

Preliminary Class

713

Data entry by : SALEEKUL, SIRILUCK   Team : OIPE   Date: 05/16/2001

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15 (b).

PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 500 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents
Office of Initial Patent Examination
Customer Service Center
Washington, DC 20231